

I claim:

CLAIMS

1 1. An apparatus comprising:
2 a first video monitor;
3 a second video monitor;
4 a vehicle interface for receiving a plurality of control signals from a vehicle;
5 a plurality of video cameras that each provide a video output; and
6 a video switching mechanism coupled to the first video monitor, the second video
7 monitor, the vehicle interface and the plurality of video cameras, the video switching
8 mechanism comprising:
9 a first monitor source selector that determines which video output of the
10 plurality of video cameras to display on the first video monitor;
11 a first default source specification that determines which video output of
12 the plurality of video cameras to display on the first video monitor when no
13 control signals are active on the vehicle interface;
14 a second monitor source selector that determines which video output of the
15 plurality of video cameras to display on the second video monitor independent of
16 the video output displayed on the first video monitor; and
17 a second default source specification that determines which video output
18 of the plurality of video cameras to display on the second video monitor.

1 2. The apparatus of claim 1 further comprising a user interface that allows a user to
2 modify the first default source specification and the second default source specification.

1 3. The apparatus of claim 1 wherein the first monitor source selector displays on the
2 first video monitor a video output of a video camera disposed to provide a view of the left
3 side of the vehicle in response to a left turn signal on the vehicle being activated on the
4 vehicle interface.

1 4. The apparatus of claim 1 wherein the first monitor source selector displays on the
2 first video monitor a video output of a video camera disposed to provide a view of the
3 right side of the vehicle in response to a right turn signal on the vehicle being activated on
4 the vehicle interface.

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1 5. The apparatus of claim 1 wherein the first monitor source selector displays on the
2 first video monitor a video output of a video camera disposed to provide a rear view of
3 the vehicle in response to a signal on the vehicle being activated on the vehicle interface
4 that indicates that the vehicle is in reverse.

1 6. The apparatus of claim 1 wherein the video switching mechanism displays on the
2 first video monitor a graphical view indicator that indicates which video output is
3 currently being displayed on the first video monitor.

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1 7. An apparatus comprising:
2 a video monitor;
3 a vehicle interface for receiving a plurality of control signals from a vehicle;
4 a plurality of video cameras that each provide a video output; and
5 a video switching mechanism coupled to the video monitor, the vehicle interface,
6 and the plurality of video cameras, the video switching mechanism comprising:
7 a source selector that determines which video output of the plurality of
8 video cameras to display on the video monitor;
9 a default source specification that determines which video output of the
10 plurality of video cameras to display on the first monitor when no control signals
11 are active on the vehicle interface; and
12 a user interface that allows a user to change the default source
13 specification.

1 8. The apparatus of claim 7 wherein the source selector displays on the video
2 monitor a video output of a video camera disposed to provide a view of the left side of the
3 vehicle in response to a left turn signal on the vehicle being activated on the vehicle
4 interface.

1 9. The apparatus of claim 7 wherein the source selector displays on the video
2 monitor a video output of a video camera disposed to provide a view of the right side of
3 the vehicle in response to a right turn signal on the vehicle being activated on the vehicle
4 interface.

1 10. The apparatus of claim 7 wherein the source selector displays on the video
2 monitor a video output of a video camera disposed to provide a rear view of the vehicle in
3 response to a signal on the vehicle being activated on the vehicle interface that indicates
4 that the vehicle is in reverse.

1 11. The apparatus of claim 7 wherein the video switching mechanism displays on the
2 video monitor a graphical view indicator that indicates which video output is currently
3 being displayed on the video monitor.

1 12. The apparatus of claim 7 further comprising:
2 a second video monitor;
3 wherein the video switching mechanism further comprises:
4 a second monitor source selector that determines which video output of the
5 plurality of video cameras to display on the second video monitor independent of
6 the video output displayed on the first video monitor; and
7 a second default source specification that determines which video output
8 of the plurality of video cameras to display on the second video monitor.

1 13. The apparatus of claim 12 further comprising a user interface that allows a user to
2 change the second monitor source selector to display a different output on the second
3 video monitor independently from the output displayed on the video monitor.

1 14. An apparatus comprising:
2 a video monitor;
3 a vehicle interface for receiving a plurality of control signals from a vehicle;
4 a plurality of video cameras that each provide a video output; and
5 a video switching mechanism coupled to the video monitor, the vehicle interface,
6 and the plurality of video cameras, the video switching mechanism comprising:
7 a source selector that determines which video output of the plurality of
8 video cameras to display on the video monitor; and
9 a view indicator mechanism that displays a graphical view indicator on the
10 video monitor that indicates which video output is currently being displayed on
11 the video monitor.

1 15. The apparatus of claim 14 wherein the source selector displays on the video
2 monitor a video output of a video camera disposed to provide a view of the left side of the
3 vehicle in response to a left turn signal on the vehicle being activated on the vehicle
4 interface.

1 16. The apparatus of claim 14 wherein the source selector displays on the video
2 monitor a video output of a video camera disposed to provide a view of the right side of
3 the vehicle in response to a right turn signal on the vehicle being activated on the vehicle
4 interface.

1 17. The apparatus of claim 14 wherein the source selector displays on the video
2 monitor a video output of a video camera disposed to provide a rear view of the vehicle in
3 response to a signal on the vehicle being activated on the vehicle interface that indicates
4 that the vehicle is in reverse.

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- 1 18. The apparatus of claim 14 wherein the video switching mechanism displays on the
- 2 video monitor a graphical view indicator that indicates which video output is currently
- 3 being displayed on the video monitor.

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1 19. An apparatus comprising:
2 a first video monitor mounted in the view of a driver of a vehicle;
3 a second video monitor mounted in the interior of the vehicle;
4 a vehicle interface for receiving a plurality of control signals from the vehicle;
5 a plurality of video cameras coupled to the vehicle that each provide a video
6 output; and
7 a video switching mechanism coupled to the first video monitor, the second video
8 monitor, the vehicle interface, and the plurality of video cameras, the video switching
9 mechanism comprising:
10 a first monitor source selector that determines which video output of the
11 plurality of video cameras to display on the first video monitor;
12 a first default source specification that determines which video output of
13 the plurality of video cameras to display on the first video monitor when no
14 control signals are active on the vehicle interface;
15 a second monitor source selector that determines which video output of the
16 plurality of video cameras to display on the second video monitor independent of
17 the video output displayed on the first video monitor; and
18 a second default source specification that determines which video output
19 of the plurality of video cameras to display on the second video monitor;
20 a user interface that allows a user to modify the first default source
21 specification and the second default source specification;
22 wherein the first monitor source selector displays on the first video
23 monitor a video output of a video camera disposed to provide a view of the left
24 side of the vehicle in response to a left turn signal on the vehicle being activated
25 on the vehicle interface;
26 wherein the first monitor source selector displays on the first video
27 monitor a video output of a video camera disposed to provide a view of the right
28 side of the vehicle in response to a right turn signal on the vehicle being activated
29 on the vehicle interface;

(claim 19 continued)

29 wherein the first monitor source selector displays on the first video
30 monitor a video output of a video camera disposed to provide a rear view of the vehicle
31 in response to a signal on the vehicle being activated on the vehicle interface that indicates that the vehicle is in reverse;
32 wherein the video switching mechanism displays on the first video
33 monitor a graphical view indicator that indicates which video output is currently
34 being displayed on the first video monitor.

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1 20. A method for displaying on a video monitor the outputs of a plurality of video
2 cameras mounted on a vehicle according to control signals received on a vehicle
3 interface, the method comprising the steps of:

4 providing a first default source specification that determines which output is
5 displayed on the video monitor when no control signals are present on the vehicle
6 interface;

7 providing a user interface that allows a user to define a second default source
8 specification that determines which output is displayed on the video monitor when no
9 control signals are present on the vehicle interface;

10 when no control signals are present on the vehicle interface and the user has not
11 specified a default source specification via the user interface, displaying the output
12 determined by the first default source specification; and

13 when no control signals are present on the vehicle interface and the user has
14 specified a second default source specification via the user interface, displaying the
15 output specified by the second default source specification.

1 21. The method of claim 20 further comprising the step of displaying on the video
2 monitor a video output of a video camera disposed to provide a view of the left side of the
3 vehicle in response to a left turn signal on the vehicle being activated on the vehicle
4 interface.

1 22. The method of claim 20 further comprising the step of displaying on the video
2 monitor a video output of a video camera disposed to provide a view of the right side of
3 the vehicle in response to a right turn signal on the vehicle being activated on the vehicle
4 interface.

1 23. The method of claim 20 further comprising the step of displaying on the video
2 monitor a video output of a video camera disposed to provide a rear view of the vehicle in
3 response to a signal on the vehicle being activated on the vehicle interface that indicates
4 that the vehicle is in reverse.

1 24. The method of claim 20 further comprising the step of displaying on the video
2 monitor a graphical view indicator that indicates which video output is currently being
3 displayed on the video monitor.

1 25. A method for displaying on a video monitor the outputs of a plurality of video
2 cameras mounted on a vehicle according to control signals received on a vehicle
3 interface, the method comprising the steps of:

4 displaying an output of one of the plurality of video cameras on the video
5 monitor; and

6 displaying a graphical view indicator on the video monitor that indicates which
7 video output is currently being displayed on the video monitor.

1 26. The method of claim 25 further comprising the step of displaying on the video
2 monitor a video output of a video camera disposed to provide a view of the left side of the
3 vehicle in response to a left turn signal on the vehicle being activated on the vehicle
4 interface.

1 27. The method of claim 25 further comprising the step of displaying on the video
2 monitor a video output of a video camera disposed to provide a view of the right side of
3 the vehicle in response to a right turn signal on the vehicle being activated on the vehicle
4 interface.

1 28. The method of claim 25 further comprising the step of displaying on the video
2 monitor a video output of a video camera disposed to provide a rear view of the vehicle in
3 response to a signal on the vehicle being activated on the vehicle interface that indicates
4 that the vehicle is in reverse.

1 29. A method for displaying on a video monitor in a vehicle the outputs of a plurality
2 of video cameras mounted on the vehicle according to control signals received on a
3 vehicle interface, the method comprising the steps of:
4 providing a first default source specification that determines which output is
5 displayed on the video monitor when no control signals are present on the vehicle
6 interface;
7 providing a user interface that allows a user to define a second default source
8 specification that determines which output is displayed on the video monitor when no
9 control signals are present on the vehicle interface;
10 when no control signals are present on the vehicle interface and the user has not
11 specified a default source specification via the user interface, displaying the output
12 determined by the first default source specification;
13 when no control signals are present on the vehicle interface and the user has
14 specified a second default source specification via the user interface, displaying the
15 output specified by the second default source specification;
16 when a left turn signal is active on the vehicle interface, displaying on the video
17 monitor a video output of a video camera disposed to provide a view of the left side of the
18 vehicle;
19 when a right turn signal is active on the vehicle interface, displaying on the video
20 monitor a video output of a video camera disposed to provide a view of the right side of
21 the vehicle;
22 when a signal on the vehicle interface that indicates that the vehicle is in reverse is
23 active, displaying on the video monitor a video output of a video camera disposed to
24 provide a rear view of the vehicle;
25 displaying on the video monitor a graphical view indicator that indicates which
26 video output is currently being displayed on the video monitor; and
27 displaying on a second video monitor an output of a video camera independently
28 of the display on the video monitor.
